NATIONAL PARK SERVICE
APPROPRIATE ACCESS
FOR PEOPLE WHO ARE HARD OF HEARING OR DEAF

In order for NPS to have full and consistent access for people who are hard of hearing or deaf at each park, the following three types of access must be offered whenever there is sound output (voice or audio):

1- Assistive Listening Devices (Headsets and Neck Loops) ***and***
2- Captioning ***and***
3- Qualified Interpreters

In addition, there must be appropriate staff training and signage.

These three services can be implemented at the National Parks as follows:

A- **Theaters**

The ADA Guidelines require ALDs (Headsets.) Currently, hearing-aid compatible devices or neck loops are awaiting the Department of Justice's approval. Neck loops should be available since headsets do not work for someone with more than a mild hearing loss. The volume control is not strong enough. Neck loops allow the person's own hearing aid to regulate the volume. These Guidelines apply to all theaters that are places of public accommodation with 50 or more fixed seats. (The elimination of the fixed seat requirement is awaiting the Justice Department's approval.) The ALDs receive the sound via a sound system called and assisitive listening system. There are currently three types of systems that are available:

1- FM- This system works via a radio frequency.
2- Infrared- This system works via a beam of light.
3- Induction Loop- This system utilizes an electro-magnetic coil around the room to create a magnetic field. Hearing aid wearers with T-coils receive the sound directly via their hearing aids or cochlear implants.

There are several factors that would determine which system would be appropriate for each site. The Kennedy Center's Guide to Assistive Listening Systems for Theaters is a useful tool to aid in assessing which system is appropriate for each venue.

1- Assistive Listening Devices

ALDs (headsets or neck loops) enable visitors to receive sound directly in their ears. There are different styles of receivers. Some ALDs fit directly into the ear

and some require headphones or neck loops to be plugged into the output jack of the receiver that is the size of a deck of playing cards. The type of ALS selected is based on the person's degree of hearing loss, whether they use a hearing aid or cochlear implant, the age the person lost their hearing, the level of auditory training they received and their current age. A signal is sent from the system to the receiver. If an Induction Loop System were utilized then only someone without a T-coil would need to wear a receiver. Anyone with a T-coil would just activate the T-coil on his or her hearing aid to hear the sound. ALDs allow someone to increase the volume and receive the sound directly in their ear without disturbing anyone else. A Population Chart detailing the degrees of hearing loss and what type of accommodation needed is attached. [See Chart 1] Also, a FAQ Sheet on neck loops and T-coils is attached. [See Chart 2] The League for the Hard of Hearing prepared the FAQ sheet.

When installing the system, it is important to ensure the appropriate number of receivers is available at any given place of assembly. The requirements are detailed in the ADA Accessibility Guidelines ("ADAAG"). ADAAG can be found at www.access-board.gov. For your reference, I have attached some Technical Support for Assistive Listening Systems. [See Chart 3]

2- Captioning

Unfortunately, not all people can utilize the ALDs due to the severity of their hearing loss. [See Chart 1] In addition to the assistive listening system, NPS should offer captioning for all films. There are two methods of captioning, open and closed. Open is when the captioning is always on and either appears on the film screen or a data strip below the screen. Closed captioning is when it is either turned on and off or selectively seen by only those who need it.

The NPS recommends and we agree that open captioning should be offered. Open captioning is easiest since there is nothing to maintain and nothing to turn on and off. Therefore, it saves the staff time. It is also always visible. Many people are embarrassed by their hearing loss and will not ask for the assistance they require. Open captioning allows people to participate without feeling any stigma they may perceive is attached to hearing loss. Therefore, if the event is a film, then a captioned version of the film should be ordered. We suggest inserting a clause in NPS' contracts that all films must be captioned. Please note, the History Channel videos should all have captioning. If not, they will replace their videos for videos with captioning for FREE.

For closed captioning, it can be either seen on the screen only when someone turns on the captions or when a special data panel is affixed to the seat. Please be aware that these data panels need to be cleaned and maintained.

If, however, the event is a lecture then Computer Assisted Real Time Captioning ("CART") should be offered for specifically scheduled lectures or presentations. CART provides access for people whose hearing loss is more profound and cannot use the assistive listening system. It is the exact translation, which is

similar to a court reporter transcribing a statement of a witness.

3- Qualified Interpreters

Qualified interpretation (ASL, Oral, Transliteration or Cued Speech) needs to be offered in the appropriate format that is tailored to the individual to achieve effective communication. Also, ASL is not English. ASL is a visual language with its own syntax and grammar that is quite different from the English language. For example, instead of saying, "There goes the blue car," ASL would sign, "car, blue." For some people who communicate primarily using ASL, a qualified interpreter will be necessary to ensure effective communication. For some people who are hard of hearing or deaf and do not use ASL, captioning may be necessary to ensure effective communication.

Most people with hearing loss, including many with profound loss, do not use ASL. ASL should still be included as a component of access but it is not a solution for access for the majority of people with hearing loss. Qualified sign interpretation should be offered for scheduled and/or announced events and/or upon request with reasonable advance notice.

For CART and signing, it is imperative that the quality and accuracy are checked prior to hiring them. There is a wide range in skill level among those who caption and sign. Poor quality captioning or sign language does not provide appropriate access.

Note:

Appropriate seating should be available for those who rely on lip reading. This is very important, because the levels of hearing loss are not clearly defined even though it appears that way on The Population Chart. [See Chart 1] There is overlap between the groups. Some people (like my daughter) who rely on an ALD still miss some of the critical dialogue. Lip reading helps to fill in the gaps. Seat placement is critical for lip reading. The theater attendee must be near the stage and not view the speaker from an odd angle. For this reason, an appropriate number of seats should be made available. This is no different than those patrons who need special seating for wheelchair accommodations or for visual access.

B- **Docent Tours**

FM systems are ideal for docent tours that are mobile to overcome poor acoustics that even challenge people who do not have a hearing loss.

1- Assistive Listening Devices

As mentioned earlier, the ADA requires a certain number of ALDs for theaters. The ADA, however, is not clear on the number of ALDs required for FM-led docent tours. Therefore, to determine the appropriate number of neck loops, we

recommend using the same 4% number from the ADA and applying it to the number of FM receivers instead of the number of seats.

2- Captioning: Transcripts

Transcripts of the docent tour should be available in regular and large print for those visitors who cannot use ALDs.

3- Qualified Interpreters

Qualified interpretation should be offered for scheduled and/or announced tours and/or upon request with reasonable advance notice.

C- **Videos**

It is important when installing multiple videos that the acoustics are considered. Many new museums are offering multi-media presentations without understanding how competing sound affects a person's ability to hear and thus learn. Hiring an acoustical engineer is recommended. Some items that other museums have utilized to deal with the acoustical issues are the installation of theater curtains and utilizing headsets and neck loops for individual monitors. But again, an acoustical engineer should be consulted.

1- Assistive Listening Devices: Induction Loop System

If a video or film does not have sound then a sign should be posted stating, "No Sound." This would inform the visitor who is hard of hearing or deaf not to expect sound or an ALD. If there is just ambient music playing then musical symbols should be posted on the monitor or if there is one type of background sound then it should be clearly identified on a nearby sign.

Both seeing and hearing a film or video provide certain benefits. If an individual who is hard of hearing can receive the same benefits of sound (loud, soft, angry, happy, sad, singing etc.) with a reasonable modification of an ALD, then an ALD is required to be provided for an equal opportunity to effectively participate.

Captioning does not generally work for children below approximately 4th grade who are unable to read quickly enough. As mentioned earlier, the needs of hearing loss vary by age just as they vary based on the degree of loss. One way to meet the needs of young children, who can't read or read quickly enough as well as those who rely heavily on their hearing aids, is to provide an induction loop system around any audio exhibit. In layman's terms, sound is transmitted through a thin wire surrounding the exhibit area via magnetic energy. For your reference, to loop an area could cost as low as $750. In order to learn more about looping, please visit www.hearingloop.org. An alternative to an induction loop system is to install headsets and neck loops adjacent to the monitor or to use a new mini-infrared system.

2- Captioning

To provide appropriate access for people who are hard of hearing and deaf, all videos need to be captioned. Captioning assists foreign visitors as well. By captioning the videos, not only will they now be accessible to people who are hard of hearing and deaf but also the sound of the video can be lowered which will help with the acoustics

For your reference, to caption a 15-minute video costs approximately $600-750. It is, however, important to select a captioning company based on accuracy of captioning and not based on price alone. Contracts should require that all captioning must be spelled 100% correctly and 100% accurately reflect what is stated. It might seem obvious but sadly, it isn't.

Many National Parks show History Channel videos. These videos already contain captioning. *The company is happy to replace for FREE any videos that do not contain captioning*.

3- Qualified Interpreters

Qualified interpretation should be offered upon request with reasonable advance notice.

D- **Audio Guide Tours**

1- Assistive Listening Devices

When audio guides are available, it is imperative that neck loops or t-coil compatible audio guides are available and that appropriate signage is posted.

2- Captioning: Transcripts

Transcripts in regular and large print should be available.

3- Qualified Interpreters

This should be offered for scheduled and/or announced tours and/or upon request with reasonable advance notice.

E- **Boats**

The announcements and emergency drills on boat tours are difficult to hear for everyone. Shouting into a bullhorn is not appropriate access for people with a hearing loss.

1- Assistive Listening Devices

To disseminate clearly the information and emergency drills, the boat should

have an induction loop system.

2- Captioning

LED displays at various places on the boat or transcripts of the announcements and emergency information should be available.

3- Qualified Interpreters

Qualified interpretation should be offered upon request with reasonable advance notice.

F- **Audio Phones**

1- Assistive Listening Devices

Anytime there are phone receivers with audio transmitting through them, the receivers need to be hearing-aid (T-coil) compatible. There also needs to be prominent signage (Please see www.hearingloop.org) indicating that the receivers are usable by individuals with hearing aids and cochlear implants equipped with T-coils. If the phones are out of order, there needs to be a sign stating they are out of order so the visitor knows they are broken and not to expect sound.

2- Captioning

Transcripts in both regular and large type should be available

3- Qualified Interpreters

Qualified interpretation should be offered upon request with reasonable advance notice.

G- **Special Exhibits**

Exhibits with sound alone e.g. no films are difficult for someone with hearing loss. There are no facial cues available for them to augment their hearing if they have residual hearing. If a person does not have residual hearing, there is no possibility to understand what is happening within the exhibit.

1- Assistive Listening Devices

An induction loop should be utilized.

2- Captioning

An LED screen or a printed transcript in both regular and large print should be available.

3- Qualified Interpreters

Qualified interpretation should be offered upon reasonable request with advance notice.

H- **Sound Enhancement Devices**

1- Assistive Listening Devices

All audio devices should be T-coil compatible and volume control. We recommend requesting documentation from the company to ensure the device is compatible. Any accessible device should post the ear symbol with the "T." This symbol can be found on www.hearingloop.org.

2- Captioning

An LED screen or a printed transcript in both regular and large print should be available.

3- Qualified Interpreters

Qualified interpretation should be offered upon request with reasonable advance notice.

I- **Classrooms, Information and Ticket Desk**

1- Assistive Listening Devices

The classrooms, information, audio guide and ticket desk should have an induction loop system installed. This allows someone with a hearing loss to hear in a class, ask questions, pick-up an audio guide and/or purchase tickets.

2- Captioning: Paper

CART should be available with advance notice if a student requires it. A piece of paper and pen should be available at the information, audio guide and ticket desk for people to write their questions down and/or receive answers to their questions.

3- Qualified Interpreters

Qualified interpretation should be offered at all parks. All park personnel who know sign interpretation should have the ASL symbol on their nametag. This identifies appropriate staff that can assist a visitor when needed.

J- **Phone**

There needs to be a TTY phone and a hearing-aid (T-coil) compatible phone available. In addition, all phones should have volume control.

K- **Service Animals**

Park staff should understand that service animals are not just for the blind but are used by people with other disabilities as well. Service animals, however, must be clearly identified in accordance with National Park Service regulations.

L- **Emergencies**

A system must be in place for emergencies. Both sound amplification with low frequencies and visual or tactile alarms must be used. These need to be in the buildings as well as on trails and at organized campsites. Park personnel should also realize that someone who is hard of hearing will not be wearing their aids at night and will not hear emergency warnings. Park personnel should request hearing aid users to identify themselves voluntarily so they can receive appropriate emergency warnings and visual strobes or tactile warnings.

M- **Advertisements, Brochures, Mailings, Signage and Websites.**

All of the steps I have outlined mean little if visitors are not aware of them. Therefore, the appropriate symbols (e.g. assistive listening devices, captioning, American Sign Language interpretation) and information must be posted at the ticket and audio desks, outside the theater and beside any appropriate exhibits. Also, the symbols need to be listed in the brochures, mailings, advertisements and on the website. Some excellent examples of web sites are:

http://www.daheshmuseum.org/visit/index.html
http://www.tenement.org/vizinfo_ada.html
http://www.asiasociety.org/visit/newyork.html
http://www.frick.org/information/access.htm
http://www.hillwoodmuseum.org/planningyourvisit.htm#accessibility
http://www.lincolncenter.org/visitor/accessibility.asp?session=CF1FB16F-41AD-4905-9558-654CABEE7BC0&version=&ws=&bc=2
http://www.amnh.org/museum/welcome/accessibility/?src=pv_vi

The methodology recommended and is utilized on all of these web sites. The access information is located by going to "Visit Us" and then to the section on "Access" or "Accessibility." All of the information is then sorted by disability. The symbols should appear on the left and the appropriate information on the right. All the parks need to have a consistent approach to access and all of the parks must be required to provide access information to Washington so that the website can be updated. We would be happy to review the information prior to posting it on the web.

For your reference, the following website has all the access symbols formatted for easy downloading.

http://www.gag.org/resources/das.php

The phrase, “headset or neck loop are available” or “T-coil or hearing-aid compatible” should be included under the symbol so that patrons will know specifically what type of equipment is available. An alternative T-coil compatible symbol is available at www.hearingloop.org.

N- **School Trips**

The Education Department should remind schools to bring the FM system if available for a child who is hard of hearing. In a pinch, the Education Department should be aware that the docent FM system is available. Please realize that if the FM system is forgotten, the child suffers and is left behind. Also, the Education Department should inquire whether a qualified interpreter is needed.

O- **Training Program**

An ongoing training program for all museum personnel is needed so that everyone is aware of what options are available at NPS. All the money spent on access and all the appropriate access is worthless unless the staff is appropriately trained and knowledgeable about what accommodations are available.

There also needs to be a 504 Coordinator who is a point person for access information and complaints. Access training participation should be a mandatory part of an employee’s annual review.

An Access Guide should be available at the information desk. There should be a separate page for each type of disability and the type of accommodations available at NPS. The 504 Coordinator’s contact information should be listed on the inside cover.

SUMMARY:

The mandate of the National Park System is to be accessible to everyone. With these proposals and adequate training, the National Parks can offer consistent access for visitors who are hard of hearing and deaf and allow them to visit the National Parks and experience their America.

Chart 1

POPULATION CHART

Hearing Loss Population = 31.5 Million[1]

Nature of Loss	Potential Accommodation
• Mild to Moderate	• Assistive Listening Device (Headset) • Captioning
• Moderate to Severe	• Assistive Listening Device (Neck Loop or Induction Loop System) • Captioning
• Profound to Deaf	• Captioning • Sign Interpretive Services

1. The Hearing Review 2006

Chart 2

Induction Receivers/Neck Loops - Frequently Asked Questions.

What is an induction receiver/neck loop?

While you may already be familiar with the headset or stethoscope type of infrared receiver used at this theater, there is another type of receiver that is known as an induction or neck loop receiver. It will receive the infrared signal that is transmitted in this theater but, unlike the headset type of receiver, cannot be used alone but must be used with hearing aids. In addition, the hearing aids MUST be equipped with TELEPHONE SWITCHES.

How is this receiver used?

The receiver is hung around your neck using the attached cord and the neck loop is placed over your head. Make sure the plastic lens faces outward. Turn your TELEPHONE switches to the "T" position; turn the induction receiver on using the rotary knob that also serves as the volume control. You can also adjust the volume by using the volume controls, if present, on your hearing aids.

How do I know if I need an induction receiver?

While most people with a mild to moderate hearing loss can use the standard headset receivers, those individuals with a more extensive hearing loss, that is, severe to profound, may find it advantageous to use an induction receiver. The induction receiver can provide a number of advantages over the standard headset receiver that are:

1) You do not have to remove your hearing aids but merely switch them to the "T" position in order to use the induction type receiver.

2) You can most likely get higher volume, if needed than with the headset.

3) If you are using the headset receiver and find it necessary to turn up the volume to the maximum or near maximum level, you may be inadvertently disturbing audience members sitting next to or close to you because some of the sound from your headset can leak out causing an unpleasant echo.

Again, in order to use an induction or neck loop receiver, your hearing aids MUST HAVE TELEPHONE SWITCHES

What exactly is a telephone switch "T" (also known as a telephone coil)?

A telephone switch enables a hearing aid user to pick up the signal coming from the earpiece of a telephone handset be means of a small coil of wire which is sensitive to the magnetic field being emitted from the telephone earpiece. This will make it easier for many (but not necessarily all) hearing aid users to use the telephone. It turns out that this technology, although originally developed for telephone use, has other applications and can be used to enable a hearing aid to directly pick up other signals such as those emitted by an infrared induction receiver.

How do I know if I have a telephone switch?

On some hearing aids, there may be a switch labeled O-T-M or M-T. On other hearing aids, there may be a switch with other labeling or no labeling at all. On some newer hearing aids, there may be no visual indication that the telephone switch is present - it may be activated by pressing in on the aid in a certain spot or remote control or by just holding a telephone over the hearing aid. In general, the smallest types of hearing aids such as the CIC (completely in the canal) do not have telephone switches. If you are not sure whether or not your hearing aids have a telephone switch, you can check with your audiologist or hearing aid specialist.

League for the Hard of Hearing, 5/13/2003

Chart 3

Technical Support for Assistive Listening Systems

The assistive listening device (“ALD”) distributors need to be trained to test the equipment before it is given to the patron. According to Josh Gendel, Director of Technology at The League for the Hard of Hearing, two inexpensive pieces of equipment from Radio Shack are needed. They are the Radio Shack Mini-Audio Amplifier #277-1008 for approximately $11.99 and the Telephone Bug #44-533 for approximately $3.99. Placing the Bug next to the neck loop can quickly test the neck loop. Any sound the neck loop receives will be heard through the Mini-Audio Amplifier.

Not only is it important to ensure that the equipment is working but it is also important to confirm that the equipment is working in the attendee's seat prior to the start of the show. On many occasions, my daughter heard only static through her neck loop. This meant the signal wasn't strong enough and either there were not enough infrared emitters or the emitter was moved during a performance. None of which could easily be remedied. The only solution was to change seats. Unfortunately, on these occasions, it was too late to change seats since we did not realize this problem until after the event began. This problem could have been avoided if the theater had a pre-show sound test.

The pre-show sound test is accomplished by having a CD/tape playing prior to the start of the show but run only through the assistive listening system. The audience cannot hear the sound unless they are wearing the ALD. By having the sound on while patrons are arriving, anyone whose seat is not receiving the signal or whose neck loop/headset is not working would be able to make appropriate arrangements prior to the start of the event. This alleviates disturbances during the event. In the end, the customer is satisfied rather than disappointed.

A sound loop explaining the ALD should be developed. This can be done on either a CD or on MP3 player that would cost approximately $300. This system is currently implemented at Disney World, most Broadway theaters and at Avery Fischer Hall.